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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/289,507	04/09/1999	PAUL DRZAIC	INK-039	8699

21323 7590 06/02/2004

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BOSTON, MA 02110

EXAMINER

NGUYEN, JIMMY H

ART UNIT	PAPER NUMBER
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2673

37

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/289,507

Applicant(s)

DRZAIC ET AL.

Examiner

Jimmy H. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 66, 67 and 80-107 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 66, 67 and 80-107 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Request for Continued Examination

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 28th, 2004 has been entered. Claims 66, 67 and 80-107 are currently pending in the application. An action on the RCE follows:

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 80-107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson et al. (USPN: 5,961,804), hereinafter Jacobson.

As per claims 80-82 and 85-91, Jacobson discloses a display apparatus comprising a multichromatic electrophoretic display element (see fig. 4B), which comprises a plurality of same microcapsules (320) (see fig. 4B) (corresponding to the claimed first, second and third capsules), each microcapsule (320) comprising a plurality of white microparticles (400) (col. 8, line 37) (corresponding to the claimed white particles in the first capsule, the claimed second plurality of colored particles in the second capsule, or the claimed fourth plurality of colored particles in the third capsule), a plurality of differently colored microparticles (420)

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(corresponding to the claimed plurality of colored particles in the first capsule, the claimed third plurality of colored particles in the second capsule, or the claimed fifth plurality of colored particles in the third capsule) different from white (see col. 10, line 22-23), a suspending fluid (405) (see fig. 4B), and a plurality of electrodes (electrodes 300, 310) adjacent the display element (fig. 4B), the display element presents a visual display in response to the application of an electrical to the microcapsule (col. 9, lines 3-9), and a white visual display is provided by at least the first plurality of white particles (400) (see fig. 4B and col. 10, lines 21-26). The Jacobson reference does not expressly teach the variously colored microparticles (420) different from black, or being specific colors as presently claimed. Accordingly, the Jacobson reference discloses all the claimed limitations except for the variously colored microparticles (420) different from black, or being specific colors as presently claimed.

However, in particular, Jacobson discloses the following at column 3, lines 14-17: "The display of the present invention may include more than one type of particle. That is, the particles within each microcapsule may be heterogeneous in terms of physical properties and/or color. In this way it is, for example, possible to omit reliance on the carrier fluid for one of the display colors, using only differently colored particles". Jacobson further discloses that "[a] wide range of pigment particles can serve as the internal-phase microparticles, the primary criteria governing their choice being appropriate charge, size, color, and amenability to processing as described below" (see col. 4, lines 9-12). Accordingly, based on the Jacobson reference considered as a whole, the Jacobson reference generally teaches a multichromatic electrophoretic display element comprising the claimed first, second and third capsules which contain white (400) and variously colored microparticles (420). While Jacobson may not exemplify particular

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arrangements of capsules containing specific colors as presently claimed, one of ordinary skill in the art would have found that the selection of the particular colors of the microparticles would have been an obvious matter of design choice, since such a modification would have involved a mere change in color of one type of microparticles, which depends upon on the characteristics of the display being used in accordance with a particular application, e.g., a red and white display, a green and white display, or etc. Accordingly, one of ordinary skill in the art would have found it obvious to obtain the invention as presently claimed.

Regarding to claims 94-97 and 100-104, Jacobson discloses a display apparatus comprising an electrophoretic display element which comprises a plurality of same electrophoretic microcapsules (320) (see fig. 4B), corresponding to the claimed first, second and third capsules, each microcapsule (320) (see fig. 4B) comprising a plurality of white microparticles (400) (col. 8, line 37), a plurality of differently colored microparticles (420) different from white (see col. 10, line 22-23), a suspending fluid (405) (see fig. 4B), and a plurality of electrodes (electrodes 300, 310) adjacent the display element (fig. 4B), the display element presents a visual display in response to the application of an electrical to the microcapsule (col. 9, lines 3-9), and a white visual display is provided by at least the first plurality of white particles (400) (see fig. 4B and col. 10, lines 21-26). Jacobson further teaches another embodiments in which each of microcapsule (320) further includes a plurality of retroreflective colored microparticles (620/630) for enhancing the brightness of a pixel (see figs. 6A and 6B, col. 12, lines 11-22). It would have been obvious to one skilled in the art to provide a plurality of the retroreflective colored microparticles in the microcapsules of the embodiment as shown in figure 4B because this would enhance the brightness of a pixel, as taught by Jacobson

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(col. 12, lines 11-22). In other words, the combination of the embodiments discussed above would produce each of the first, second and third microcapsules, comprising a plurality of white microparticles (400), a plurality of differently colored microparticles (410) different from white and a plurality of retroreflective colored microparticles. Accordingly, one of ordinary skill in the art would have found that the combination of embodiments in the Jacobson reference discloses all the claimed limitations except that the variously colored microparticles (410) and retroreflective colored particles are different from black, and the variously colored microparticles (410) comprise a color different from the retroreflective colored particles, as presently claimed.

However, in particular, Jacobson further discloses the following at column 3, lines 14-17: “The display of the present invention may include more than one type of particle. That is, the particles within each microcapsule may be heterogeneous in terms of physical properties and/or color. In this way it is, for example, possible to omit reliance on the carrier fluid for one of the display colors, using only differently colored particles”. Also, Jacobson discloses that “[a] wide range of pigment particles can serve as the internal-phase microparticles, the primary criteria governing their choice being appropriate charge, size, color, and amenability to processing as described below” (see col. 4, lines 9-12). Accordingly, based on the Jacobson reference considered as a whole, the Jacobson reference generally teaches a multichromatic electrophoretic display element comprising the claimed first, second and third capsules which contain white, variously colored microparticles and reflective colored microparticles. While Jacobson may not exemplify particular arrangements of capsules containing specific colors as presently claimed, one of ordinary skill in the art would have found that the selection of the particular colors of the microparticles would have been an obvious matter of design choice, since such a modification

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would have involved a mere change in color of one type of microparticles, which depends upon on the characteristics of the display being used in accordance with a particular application.

Accordingly, one of ordinary skill in the art would have found it obvious to obtain the invention as presently claimed.

Regarding to claims 83, 84, 98 and 99, Jacobson also teaches the microcapsules further including the suspending fluid being substantially clear (col. 8, lines 35-36) or dyed (see claim 1, last line).

Regarding to claims 92 and 106, Jacobson further teaches a plurality of electrodes (electrodes 300, 310) adjacent the display element (fig. 4B) and at least one of the plurality of electrodes having a size different from others of the plurality of electrodes (fig. 5B).

Regarding to claims 93 and 107, Jacobson discloses that the front electrode (300) should be transparent and the rear electrode (310) may be selective (col. 8, lines 51-53).

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 66, 67 and 80-107 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 76 and 77 of copending

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Application No. 10/145,861. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed invention of the pending application contains a version, which is **broader** than the version of the invention defined in claims 76 and 77 of the copending Application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is (703) 306-5422. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at (703) 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

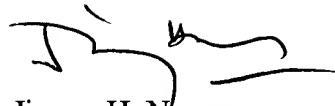
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

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JHN

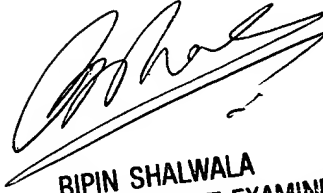
May 31, 2004



Jimmy H. Nguyen

Examiner

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BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600
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SPE of Art Unit 2673